

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions, and listings, of claims in the captioned patent application:

Listing of Claims:

1. (Currently Amended) A method of determining a position of an external transceiver relative to an implanted transceiver, the method comprising ~~the steps of~~:

measuring the strength of a magnetic field proximal to the external transceiver, wherein the magnetic field is generated at least in part by the external transceiver; and

determining a position of the external transceiver relative to the implanted transceiver from said measured magnetic field strength.

2. (Currently Amended) The method according to claim 1 wherein ~~the step of~~ determining ~~comprises~~ comprises:

comparing a measured strength of magnetic field proximal to the external transceiver to a threshold value.

3. (Currently Amended) The method according to claim 2 further ~~comprising~~ comprising:

~~the step of~~ indicating that the external transceiver has been displaced when the measured strength of magnetic field proximal to the external transceiver exceeds the threshold value.

4. (Currently Amended) The method according to claim 3 wherein ~~the step of~~ indicating ~~comprises~~ comprises:

~~providing an audible indication such as an alarm, a visible indication or other indication.~~

5. (Currently Amended) The method according to claim 1 wherein ~~the step of~~ determining ~~further comprises~~ comprises:

mapping ~~a measured value of said measured~~ magnetic field strength proximal to the external transceiver to a distance value.

6. (Currently Amended) The method according to claim 5 wherein ~~the step of~~ mapping ~~comprises~~ comprises:

consulting a look-up table comprising a plurality of pairs of values, each pair of values mapping a particular magnetic field strength to a corresponding transceiver separation distance.

7. (Currently Amended) The method according to claim 5 wherein ~~the step of~~ mapping ~~comprises~~ comprises:

algorithmically converting said measured value of magnetic field into a corresponding transceiver separation distance.

8. (Currently Amended) The method according to claim 1 further ~~comprising~~ comprising:

~~the step of~~ providing a transcutaneous link between the external transceiver and the implanted transceiver, the link being bidirectional such that the external transceiver and the implanted transceiver transmit and receive signals across the transcutaneous link.

9. (Currently Amended) The method according to claim 8 further ~~comprising~~ comprising:

~~the step of~~ transmitting power and data signals from the external transceiver to the implanted transceiver across the transcutaneous link.

10. (Currently Amended) The method according to claim 8 further ~~comprising~~ comprising:

~~the step of~~ transmitting data signals from the implanted transceiver to the external transceiver across the transcutaneous link.

11. (Currently Amended) The method according to claim 1 further ~~comprising~~ comprising:

~~the step of~~ providing a transcutaneous link between the external transceiver and the implanted transceiver, the link being unidirectional such that the external transceiver, comprising a transmitter, transmits signals to the implanted transceiver, comprising a receiver, across the transcutaneous link.

12. (Previously Presented) The method according to claim 11 wherein the signals transmitted by the transmitter are power and data signals.

13. (Currently Amended) The method according to claim 1 wherein ~~the step of~~ measuring ~~comprises~~ comprises:

positioning a pick-up coil proximal to the external transceiver such that a voltage induced on the pick-up coil is indicative of a magnetic field proximal to the external transceiver.

14. (Currently Amended) The method according to claim 13 further ~~comprising~~ comprising:
~~the step of~~ positioning the pick-up coil in a plane substantially perpendicular to a primary axis of the magnetic field, ~~wherein the magnetic~~ is produced between the external receiver and the implanted receiver.

15. (Previously Presented) The method according to claim 14 wherein the pick-up coil comprises an open-circuited single turn positioned concentrically with turns of the external receiver.

16. (Currently Amended) An apparatus for determining a position of an external transceiver relative to an implanted transceiver, the apparatus comprising:

means for measuring the strength of a magnetic field proximal to the external ~~transceiver~~
transceiver,

wherein the magnetic field is generated at least in part by the external transceiver; and

means for determining a position of the external transceiver relative to the implanted transceiver from said measured magnetic field strength.

17. (Previously Presented) The apparatus according to claim 16 further comprising means for comparing a measured strength of magnetic field proximal to the external transceiver to a threshold value.

18. (Previously Presented) The apparatus according to claim 17 further comprising means for indicating that the external transceiver has been displaced when the measured strength of magnetic field proximal to the external transceiver exceeds the threshold value.

19. (Currently Amended) The apparatus according to claim 18 wherein the means for indicating comprises any one of an audible alarm, or a visible indicator ~~or other type of indicator~~.

20. (Currently Amended) The apparatus according to claim 16 further comprising means for mapping a measured ~~value of~~ magnetic field strength proximal to the external transceiver to a distance value.

21. (Previously Presented) The apparatus according to claim 20 wherein the means for mapping comprises a look-up table comprising a plurality of pairs of values of magnetic field strength to transceiver separation distance.

22. (Previously Presented) The apparatus according to claim 20 wherein the means for mapping comprises means for algorithmically converting said measured value of magnetic field into a corresponding transceiver separation distance.

23. (Currently Amended) The apparatus according to claim 16 further comprising a ~~transcutaneous link provided by~~ wherein the external transceiver and the implanted transceiver provide a transcutaneous link.

24. (Previously Presented) The apparatus according to claim 23 wherein the transcutaneous link comprises an RF link.

25. (Previously Presented) The apparatus according to claim 23 wherein the transcutaneous link is bidirectional such that the external transceiver and the implanted transceiver transmit and receive signals across the transcutaneous link.

26. (Previously Presented) The apparatus according to claim 25 wherein power and data signals are transmitted from the external transceiver to the implanted transceiver across the transcutaneous link.

27. (Previously Presented) The apparatus according to claim 25 wherein data signals are transmitted from the implanted transceiver to the external transceiver across the transcutaneous link.

28. (Previously Presented) The apparatus according to claim 23 wherein the transcutaneous link is unidirectional, the external transceiver comprises a transmitter and the implanted transceiver comprises a receiver, such that the transmitter transmits signals to the receiver across the transcutaneous link.

29. (Previously Presented) The apparatus according to claim 28 wherein the signals transmitted by the transmitter are power and data signals.

30. (Previously Presented) The apparatus according to claim 16 wherein the means for measuring the strength of the magnetic field proximal to the external transceiver comprises a pickup coil positioned proximal to the external transceiver, such that a voltage induced on the pickup coil is indicative of a magnetic field proximal to the external transceiver.

31. (Currently Amended) The apparatus according to claim 30 wherein the pickup coil is positioned in a plane substantially perpendicular to a primary axis of the magnetic field and wherein the magnetic field is produced by the transceivers.

32. (Currently Amended) The apparatus according to claim 31, wherein the external transceiver comprises a transmitter coil comprising turns and wherein the pickup coil comprises an open circuited single turn positioned concentrically with turns of the external transceiver.

33. (Currently Amended) The apparatus according to claim 30, further comprising:
peak detector means; and

wherein an output of the pick-up coil is passed through a through the peak detector means.

34.-57. (Canceled)

58. (Previously Presented) An apparatus for determining a position of an external transceiver relative to an implanted transceiver, the apparatus comprising:

means for measuring the strength of a magnetic field proximal to the external transceiver;

means for determining a position of the external transceiver relative to the implanted transceiver from said measured magnetic field strength;

means for comparing a measured strength of magnetic field proximal to the external transceiver to a threshold value;

means for indicating that the external transceiver has been displaced when the measured strength of magnetic field proximal to the external transceiver exceeds the threshold value; and

means for mapping comprises a look-up table comprising a plurality of pairs of values of magnetic field strength to transceiver separation distance.

59. (Canceled)